

TOBACCO INDUSTRY RESEARCH COMMITTEE

6. Budget Plan:

150 EAST FORTY SECOND STREET

NEW YORK 17, N.Y.

Salaries		3000.00
Expendable Supplies		\$1570.00
Application For Research Grant:	Social Security	(17.00)
	Workman's C.I.	(18.35) 17%
Overhead		300.00
Other		586.50
	Total	5473.50

Date:

April 2, 1957

17. Name of Investigator: of **R. H. Higdon, M.D.**22. Title: Titles and Staff Available: **Professor of Pathology - Director, Laboratory of Experimental Pathology**3. Institution & Address: **University of Texas Medical Branch
Galveston, Texas**

4. Project or Subject:

9. Additional Requirements:

None

Effect of Tobacco Tar on Respiratory Tract of the Duck.

5. Detailed Plan of Procedure (Use reverse side if additional space is needed): (or sources of supply):

The U.S. Public Health Service is continuing for two years their great work. Tobacco tar will be suspended in mineral oil and 0.5 cc. of this solution will be put through the external larynx of the duck daily for varying periods of time. At different times ducks so treated will be sacrificed and the trachea will be examined under ultra violet light for fluorescent substances and then sections will be taken for histologic study.

The above techniques have been used for a year - so we are familiar with the routine. Only of this type of operation is one known. As will be seen to follow the problem of tumor formation following pulmonary.

One of the most important points I would like to follow would be to determine how long fluorescent material can be demonstrated in the trachea of the duck following discontinuation of tobacco tar. Methylcholanthrene disappears so rapidly from the trachea. I would like to see what happens to tobacco tar in the trachea of these birds. Apparently some chemical change occurs with methylcholanthrene.

The lungs from the ducks would be followed in view of the fact that preliminary observations have shown the presence of black, granular material that must be tobacco tar since we have observed it only in ducks receiving tobacco tar.

Director of Project

Our studies so far have shown that there is no problem in putting as much as 0.5 cc. of mineral oil daily into the trachea; however, the ducks will show evidence of nicotine poisoning if too much tobacco tar is given.

Business Officer of the Institution

1003540871

TOBACCO INDUSTRY RESEARCH
150 EAST FORTY SECOND STREET NEW YORK 17, N.Y.

6. Budget Plan:

Salaries	3000.00
Expendable Supplies	1200.00
Applicable Tobacco Industry Research Social security	90.00)
Overhead Workmen's C.I.	688.50) 17%
Other	300.00
Total	5278.50

Date: April 2, 1957

7. Anticipated Duration of Work: **2 years**

8. Facilities and Staff Available: **Laboratory of Experimental Pathology of Governmental
Present staff adequate to carry on this problem**

3. Institution: **Laboratory of Experimental Pathology of Governmental
Address: **Laboratory of Experimental Pathology****

6. Principal or Subject

9. Additional Requirements: **None**

Effect of Tobacco Tar on Methylcholanthrene

10. Additional Information (Including relation of work to other projects and other sources of supply):

The U.S. Public Health Service is continuing for two years their grant for the study of the effect of methylcholanthrene on the tissues of the duck. We are beginning the study of the effect of methylcholanthrene on the gastrointestinal tract of the duck. It will be important to know whether the squamous epithelial cells in the esophagus will react to methylcholanthrene the same as will the cells in the skin of the body, web of the foot, and the trachea.

The epithelium in the trachea is columnar. The duck is nicely suited for the study of this type of epithelium in the trachea. We will be able to follow the problem of tumor formation following metaplasia.

One of the main problems which I would like to follow would be an experiment in the normal ducks and those given only mineral oil will serve as controls. In the experiments where methylcholanthrene is studied and also for the experiments where tobacco tar is put into the trachea. We plan to have in the 100 tracheas from normal ducks and 100 tracheas from the mineral oil experiments.

The lungs from the ducks would be analyzed in view of the fact that preliminary observations have shown the formation of bronchogenic carcinoma in the lungs of ducks which have been exposed to the tar. Signature: /s/ R. H. Rigdon
Director of Project

It is hoped that we have shown that there is no problem in preparing the ducks for the experiment and that the ducks will show the formation of bronchogenic carcinoma in the lungs.

/s/ E. D. Walker
Business Officer of the Institution

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